

**AUBURN UNIVERSITY**  
**Department of Educational Foundations, Leadership, and Technology**  
**Professor Kraska – 4064 Haley Center**  
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**Office Hour: Monday 3:00 p.m. – 4:00 p.m.**

1. **Title:** ERMA 7100 Advanced Study of Educational Measurement and Evaluation

**Credit:** 3 Semester Hours

**Prerequisites:** Graduate Student Status

2. **Date:** August 2010

3. **Textbook:** Thorndike, R. M. (2005). Measurement and Evaluation in Psychology and Education. Prentice-Hall: Columbus, OH.

**4. Course Description:**

The focus of this course is on the concepts, principles and procedures for using, evaluating, interpreting, and reporting results of measurement and evaluation instruments as tools for decision making. Specifically, the course includes fundamental issues in testing, computer generated statistical measures related to testing, reliability and validity related to measurement procedures, various kinds of testing and measurement devices, and ethics and issues in assessment. Students taking this course should have had some experience in curriculum, educational psychology, learning theory and/or research.

**OBJECTIVES, CONTENT, STUDENT ACTIVITIES, AND STUDENT EVALUATION**

5. **Course Objectives:**

Based on classroom instruction, discussions, reading assignments, and related activities, each student should be able to demonstrate knowledge in the following areas:

- A. Explain the five periods in the twentieth century into which mental testing can be divided.
- B. Provide general historical background information related to systematic measurement.
- C Prepare and interpret computer-generated statistics related to measurement.

- D. Prepare and interpret computer-generated graphical representations related to measurement.
- E. Identify different kinds of measurement and explain the purposes of each kind.
- F. Prepare and interpret computer-generated output related to interpreting scores.
- G. Explain concepts and procedures related to item response theory, related terminology, and interpretation.
- H. Apply terminology and procedures to calculate and interpret various kinds of reliability data.
- I. Discuss factors affecting reliability.
- J. Discuss procedures used for establishing and interpreting various kinds of validity related to measurement.
- K. Discuss practical issues in testing.
- L. Discuss various types of testing and measurement devices and the purpose of each.
- M. Discuss ethical issues in assessment.

**6. Course Content:**

The following content will be covered to the extent that time allows.

**I. Introduction and Overview of the Course**

- A. Introductions
- B. Overview of Course and Requirements
- C. Course Syllabus

**II. Fundamental Issues in Measurement**

- A. Historical perspective of systematic measurement
- B. Steps in the measurement process
- C. Current issues in measurement

**III. Measurement and Numbers**

- A. Scales of measurement
- B. Frequency distributions
- C. Measures of central tendency
- D. Measures of variability

#### IV. Giving Meaning to Scores

- A. Nature of scores
- B. Criterion-referenced evaluation
- C. Norm-referenced evaluation
- D. Interpret Computer-Generated Reports
- E. Item response theory

#### V. Reliability of Measuring Instruments

#### VI. Validity of Measuring Instruments

#### VII. Practical Issues Related to Testing

#### VIII. Individual and Small Group Work on Testing and Measurement Devices

#### IX. Ethics and Issues in Assessment

#### X. Review of Course and Final Examination

### 7. **Student Assignments:**

1. Read all assigned materials
2. Complete all homework assignments \*
3. Prepare and present oral report on a specific type of classroom assessment
4. Prepare and present written report on a specific standardized test
5. Participate as a contributing member of the class
6. Complete all tests

\*Homework assignments should be typed double-spaced in 12 or 14 pt. font on one side of the paper only and printed with a dark, sharp, printer cartridge. Pages must be stapled in the upper left corner for homework to be graded. Students should be prepared to discuss their homework in class. No credit will be allowed for homework turned in late.

Method of presentation in this class will be based on large and small group discussions, individual student reports. Therefore, it is vitally important that reading assignments and homework be completed before coming to class so that you may participate as a contributing member of the class and so that appropriate and necessary clarifications may be made.

Two major projects are required for this course. An explanation of these projects follows.

Project A: Students will work individually or in teams of two to present an **oral report** (30 minutes total time) to the class on a topic related to a specific type of assessment—it's purpose, design, utility and appropriateness, specific examples, advantages and disadvantages, and special concerns and/or problems associated with the type of

assessment. The report should be based on one of the types of assessment presented in **Chapters 8 -12** of the textbook that addresses (a) aptitude tests, (b) standardized achievement tests, (c) performance and product evaluation, (d) interests, personality, and adjustment measures, and (e) attitudes and rating scales. The purpose of this assignment is to encourage students to explore various types of testing and measurement devices, to work as a contributing member of a team, and to report results of their efforts. Evaluation will be based on the overall quality of the presentation in terms of students' preparation (information is accurate, thorough, well-documented, timed well); delivery (clarity of information, clear transitions between ideas, use of professional language, professional appearance and demeanor); and professional handouts if used. An outline of the presentation should be submitted to the professor at the time of the presentation. The professor will provide a checklist for evaluation to students prior to the presentation.

Project B: Each student will prepare a **written report** of a **selected standardized measurement instrument for an area in which the student is interested**. Students should state and support their rationale for selecting the instrument. They should thoroughly investigate information related to the purpose, design, development, utility and appropriateness, administration procedures, scoring, interpretation and reporting of results, advantages and disadvantages, and special concerns and/or problems associated with the instrument. Suggested types of standardized instruments are norm-referenced achievement tests and scholastic aptitude tests. The student should decide on a specific test early enough in the semester to allow time to collect information and prepare the report. The purpose of this assignment is to provide an opportunity for students to conduct an in-depth investigation of an area of measurement and evaluation that is of particular interest to them. If time permits, the class will serve as a forum for students to share their knowledge as professionals.

The report should be typed double-spaced in 12 or 14 pt. font on one side of the paper only and printed with a dark, sharp, printer cartridge. The report should follow the APA 5<sup>th</sup> edition style manual. The report must include a list of references. A cover page is optional; however, please, no folders, binders, notebooks, etc. Staple the pages in the upper left corner.

Evaluation will be based on the overall quality of the report in terms of students' preparation (rationale is logical and based on knowledge, information is accurate, thorough, well-documented, organized logically; report is coherent, written in standard English, with no major mechanical or grammatical errors, and appropriate use of professional language. The professor will provide a format giving guidelines for preparation of the report.

**8. Evaluation:**

Assignments will be graded based on the following points.

Homework (4-5)	200 points (Late homework or homework turned in without the student present for the entire class will not be accepted)
Project A (Oral Report)	40 points
Project B ( Written Report)	40 points
Midterm Exam	100 points
Final Exam	<u>100 points</u>
Total	480 points

The following scale will be used to compute grades.

93 % - 100 % = A (Superior-Consistently contributes to learning and does superior work)  
 81% - 92 % = B (Usually contributes to learning and most work is superior)  
 71 % - 80 % = C (Moderate contributions to learning and average work performance)  
 60 % - 70 % = D (Poor contributions to learning and below average work performance)  
 Below 60 % = F (Failing)

**9. Class Policy Statements:**

The following guidelines should help students to know the course expectations that will help them to complete the course requirements successfully.

- A. There will be no unannounced quizzes in this class. However, it is strongly recommended that students read the material before coming to class. Each student's grade in this course is based on his/her own performance and not in comparison to the performance of others.
- B. Late homework will not be graded. All assignments should be handed in on time. Only hard copies will be accepted. The professor will provide due dates for assignments at the time assignments are made. All assignments should be typed, double-spaced on one side of the paper, using 12-point font and dark, sharp print. Assignments should be clean and neat. Unstapled pages will not be graded. For example, assignments held together with paper clips, folders, rubber bands, three-ring binders etc., will not be accepted. The cover page should identify the student by full name, the assignment, and the date. The entire assignment must be turned in at the same time. Partial assignments will not be graded.
- C. Students are expected to participate in all class discussions and exercises. It is possible for a student to receive high points on assignments and a grade of B in the course if the student does not contribute to the class discussion. No specific points are given for class participation because participation is expected in a graduate level course. Reading the assignment before class time is critical and

being ready to respond to questions is an expectation of the course. See the sections on Student Assignments and the Grading Scale.

- D. Attendance/Absences: Attendance is required at each class meeting. It is the student's responsibility to arrange for a classmate to take notes for him/her and to get a copy of all handouts for him/her in the event of an absence. Students are responsible for initiating arrangements for taking the mid-term and/or final examination at a time other than the scheduled time if necessary.
- E. Unannounced quizzes: There will be no unannounced quizzes.
- F. Accommodations: Students who need accommodations are asked to arrange a meeting during office hours the first week of classes, or as soon as possible if accommodations are needed immediately. If you have a conflict with my office hours, an alternative time can be arranged. To set up this meeting, please contact me by e-mail. Bring a copy of your Accommodation Memo and an Instructor Verification Form to the meeting. If you do not have an Accommodation Memo but need accommodations, make an appointment with the Program for Students with Disabilities at 1244 Haley Center, 844-2096 (V/TT).
- G. Honesty Code: The University Academic Honesty Code and the Tiger Cub Rules and Regulations pertaining to Cheating will apply to this class.
- H. Professionalism: As faculty, staff, and students interact in professional settings, they are expected to demonstrate professional behaviors as defined in the College's conceptual framework. These professional commitments or dispositions are listed below:

--Engage in responsible and ethical professional practices

--Contribute to collaborative learning communities

--Demonstrate a commitment to diversity

--Model and nurture intellectual vitality

#### **10. Justification for Graduate Credit**

Graduate courses "should be progressively more advanced in academic content than undergraduate programs" and should "foster independent learning" (SACS guidelines 3.6.1 and 3.6.2). Further, the guidelines presented in the Statement of Clarification of the Definition and Use of 6000-level courses as approved by the Graduate Council, May 21, 1997 apply:

Factors to consider in evaluating a course for graduate credit include but are not limited to the following:

--use of specific requisites

--content of sufficient depth to justify graduate credit (materials beyond the introductory level)

--content should develop the critical and analytical skills of students including their application of the relevant literature

--rigorous standards for student evaluation (all students in a 6000-level course must be evaluated using the same standards)

--course instructor must hold graduate faculty status or be approved by the Dean of the Graduate School

**11. Methodologies and Course Evaluation:**

A variety of teaching techniques and strategies will be used in the instruction of this course. The principal methods of instruction include, but may not be limited to lectures and large and small group discussions. Students will evaluate the course using a checklist of criteria.

